UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,008	04/25/2001	Paul Kennedy	033048-019	4932

21839	7590	11/27/2006	

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ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 11/27/2006

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PTO-90C (Rev. 10/03)

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/841,008
Filing Date: April 25, 2001
Appellant(s): KENNEDY, PAUL

MAILED

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Technology Center 2100

James A. LaBarre
Reg. No. 28,632
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 15 September 2006 appealing from the Office action

mailed 07 October 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,438,549	ALDRED et al.	08-2002
6,708,170	BYRNE et al.	03-2004
6,446,204	PANG et al.	09-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 9-12, 14-18, 20-23, and 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,438,549 to Aldred et al., hereinafter Aldred, in view of U.S.

Patent 6,708,170 to Byrne et al., hereinafter Byrne.

As per claims 9, 16, and 21, Aldred discloses a method for authenticating users to

individual network devices that are distributed among a plurality of locations, comprising the

following steps:

storing a directory structure at one of said locations, said directory structure comprising a

root node, a first level of nodes below said root node that are associated with respective

organizations to which said network devices are assigned, and at least one further level of nodes

below said first level that identify users who are authorized to access the network devices

assigned to the organization associated with a parent first-level node and authentication

information for said users (Figures 1 [block 21], 2, 7, column 3, line 64 to column 4, line 20,

column 6, lines 51-60);

in response to a request by a user for access to one of said network devices, determining

which organization to which said one device is assigned and whether said user is identified on a

node below the first-level node associated with the determined organization (column 1, line 66 to

column 2, line 21, column 4, line 65 to column 5, line 16, column 7, line 65 to column 8, line 4);

and

authenticating said user to said device if the user is so identified (column 7, line 65 to

column 8, line 4).

Aldred does not teach replicating said directory structure among said plurality of

locations.

Byrne discloses replicating said directory structure among said plurality of locations

(column 2, lines 32-37).

Both Aldred and Byrne are related in controlling access to various resources using a

access control lists with the lightweight directory access protocol.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to replicate the directory structure among a plurality of locations, since Byrne

discloses at column 2, lines 32-37 that such a modification allows each machine to define the

group and entry information for each domain.

Regarding claims 10, 17, and 22, Aldred teaches wherein said directory structure further

includes nodes below said first level that identify resources of an associated organization to

which authenticated users are allowed access (column 4, line 65 to column 5, line 16).

Regarding claim 11, Byrne teaches wherein said determining step is performed with

reference to a replicated copy of said directory structure at the location containing said one

device (column 2, lines 32-37, i.e. authentication based on replication).

Regarding claim 12, Byrne discloses wherein said network devices comprise servers, and

said locations are data centers (column 2, lines 23-43, i.e. distributed computing environment,

multiple servers).

Regarding claims 14, 18, and 23, Aldred teaches wherein the same user identification and authentication information is contained at a plurality of said further level nodes that are respectively associated with different ones of said first-level nodes (column 4, line 65 to column 5, line 16).

Regarding claim 15, Aldred and Byrne do not teach wherein said replicating step is carried out automatically without user input.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the replicating step automatically, since it has been held that merely automating a step requires routine skill in the art. See MPEP § 2144.04, see also *In re Venner,* 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding claims 20 and 25, Aldred teaches wherein at least some of network resources are servers that each include an authentication module that is responsive to a request for access to determine the organization to which its corresponding server is assigned and restrict directory searches to the further-level nodes below the first-level node associated with the determined organization (column 1, line 66 to column 2, line 21, column 4, line 65 to column 5, line 16, column 7, line 65 to column 8, line 4).

Claims 13, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Aldred in view of Byrne as applied above, and further in view of U.S. Patent No. 6,446,204 to

Pang et al., hereinafter Pang.

Regarding claims 13, 19, and 24, Aldred and Byrne do not wherein at least some of said

locations contain at least two replicated copies of said directory structure, and further including

the steps of distributing access requests among said replicated copies by means of a load

balancer.

Pang teaches wherein at least some of said locations contain at least two replicated copies

of said directory structure, and further including the steps of distributing access requests among

said replicated copies by means of a load balancer (figure 8, column 23, lines 50-64).

Aldred, Byrne and Pang are all related in the field of distributed authentication.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to distribute the access requests by means of a load balancer, since Pang states at

column 23, lines 50-64 that such a modification would balance the load on the authentication

hosts, thereby preventing bottlenecks.

(10) Response to Argument

In response to the Appellant's argument regarding claims 9, 16, and 21 that *Aldred* does

not disclose a directory structure comprising a root node, a first level of nodes below the root

node associated with the respective organizations, and at least one further level of nodes that

identify users who are authorized to access the network devices, the Examiner disagrees. *Aldred*

discloses at least a directory in figure 2, item 21. As seen in figure 2, the directory comprises a

root node, a first level of nodes below the root node [RDN – relative distinguished name], and

one further level of nodes that identify users [Entry (attributes)].   *Aldred* goes on to elaborate in

column 6, lines 51-60 that the root node can be country or organization (IBM is disclosed as the

example in *Aldred*'s disclosure, column 6, line 54), followed by another level which is the

department (i.e. deptXYZ from disclosure, column 6, line 54), followed by a users and their

permissions (i.e. persona from disclosure, column 6, line 54).

Since *Aldred* discloses a directory structure comprising a root node, a first level of nodes

below the root node associated with the respective organizations, and at least one further level of

nodes that identify users who are authorized to access the network devices, the rejection is proper

and should be maintained.

In response to the Appellant's arguments further regarding claims 9, 16, and 21, that

Aldred does suggest the use of a directory structure as the mechanism to store information for

authenticating users to network resources, the Examiner respectfully disagrees. The Appellant

contends that *Aldred* discloses the use of access control lists that are stored in a relational

database management system instead of in a directory structure. The Appellant has misconstrued

Aldred, and *Aldred* does in fact store the user authentication information in a directory structure,

albeit the access control lists are stored at strategic points in the tree of the Lightweight Directory

Access Protocol (LDAP) directory (*Aldred*, column 5, lines 8-13). *Aldred* goes on to discuss

how the access control-related properties conform to the LDAP model in column 5, lines 40-63.

Aldred teaches maintaining access control information in an LDAP directory and

therefore suggests the use of a directory structure as the mechanism to store information for

authenticating users to network resources and the rejection should be upheld.

In response to the Appellant's arguments that *Aldred* does not disclose that access control information is contained at certain nodes within the directory tree, the Examiner disagrees. As discussed above, *Aldred* discloses that the access control list is placed at strategic points in the hierarchical LDAP tree at column 5, lines 8-13.

Since *Aldred* discloses that the access control list is placed at strategic points in the hierarchical LDAP tree the limitation that access control information is contained at certain nodes within the directory tree has been met and the rejection should be sustained.

In response to the Appellant's arguments that *Aldred* does not teach a step that is responsive to a request by a user for access to one of the network devices to determine the organization to which that device is assigned and whether said user is identified on a node below the first-level node associated with the determined organization, the Examiner disagrees. As noted above, *Aldred* discloses a hierarchical tree where access properties propagate to entries below that point at column 5, lines 13-16.

Since *Aldred* discussed that access properties propagate down the tree, the step that is responsive to a request by a user for access to one of the network devices to determine the organization to which that device is assigned and whether said user is identified on a node below the first-level node associated with the determined organization has been taught and the rejection should be maintained.

Appellant's arguments regarding *Byrne* fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to the Appellant's argument regarding claims 10, 17, and 22 that *Aldred* does not teach information stored at various levels within a directory, the Examiner disagrees. As discussed above, the access information is stored in an LDAP directory, and not separately, as the Appellant suggests. Also as mentioned above, *Aldred* states that access information is stored at strategic points of the directory tree and propagates downward through the tree at column 5, lines 8-13.

Therefore, *Aldred* discloses information stored at various levels within a directory and the rejection should be sustained.

Appellant's arguments regarding claims 13, 14, 18, 19, 23, and 24 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
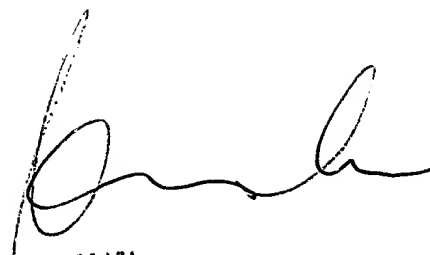
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